REMARKS

Claims 1-15 are now pending in the application. Claims 8 and 15 have been amended without introduction of new matter. Favorable reconsideration is respectfully requested in view of the above amendments and the following remarks.

Claims 8 and 15 have been amended to correct an inadvertently introduced error. In particular, in element "(d)" of claim 8 and in the next-to-last paragraph of claim 15, the word "increase" has been changed to "decrease" so that the claimed elements will be in conformance with the teachings of the specification.

Claims 1, 2, 8, 9, and 15 appear to stand rejected under 35 USC §102(e) as allegedly being anticipated by Dicker et al. (US Patent Number 6,625,466 B1). (While only claim 1 is expressly stated as being rejected under this section of the statute, the rejection in numbered paragraph 2 of the Action discusses each of the above-identified claims.) This rejection is respectfully traversed.

It is well-established that "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). In the present instance, the Dicker et al. patent fails to anticipate any of claims 1 at least because it neither expressly nor inherently discloses:

- if the performance parameter of the communication channel indicates that the performance of the communication link is satisfactory and the channel bandwidth is less than a maximum allocatable bandwidth, then increasing the channel bandwidth at the transmitter; and
- if the signal strength indicator of the communication signal at the receiver satisfies the threshold, then decreasing the bandwidth allocated to the communication channel between the transmitter and the receiver.

Independent claims 8 and 15 define comparable features, and are therefore also patentably distinguishable over the Dicker et al. patent for at least the same reasons.

As explained in Applicant's response to the previous Office Action, Dicker et al. describe an arrangement that uses a conventional power control scheme that increases the transmission power of a transmitter when the transmission quality at a receiver is determined to be poor. The Dicker et al. patent also discloses increasing transmission power when poor transmission quality is detected. See, for example, Dicker et al.'s flowchart in FIG. 7.

Nowhere does the Dicker et al. patent either expressly or inherently disclose testing the bandwidth, or increasing or decreasing the bandwidth allocated to a communication channel between the transmitter and receiver based on signal quality conditions.

In support of its rejection, the Office appears to equate decreasing transmission power with increasing channel bandwidth, and conversely increasing transmission power with decreasing channel bandwidth (e.g., on page 3, the Office Action uses phrases such as: "... the power is decreased *resulting in an increase in bandwidth*"; "... then the transmission power is increased *and, consequently, the bandwidth decreases.*"). This line of reasoning is not understood, since adjusting one does not necessarily result in an adjustment of the other. Applicant knows of no scientific principle upon which such a result is mandated. In fact, Applicant's invention relies on transmission power and channel bandwidth being separately adjustable parameters. For example, Applicant describes on page 17, lines 6-15, of the written description that:

> If the measured signal power S is above the required threshold, it is assumed that external interference is responsible for channel performance degradation, and the channel is said to be interference-limited. In an adaptive channel allocation system, the radio spectrum may be scanned to find a suitable sub-band. The probability of success of the search is a function of the channel bandwidth. Reducing the channel bandwidth increases the probability of finding an undisturbed frequency segment. Similarly, in frequency hopping systems, reducing the channel bandwidth increases the number of channels available, which in turn reduces the probability of interference in the allocated frequency spectrum. For a fixed radio spectrum, this means that the hop channel bandwidth decreases.

In contrast, Dicker et al. describe an arrangement for regulating the transmission power of a mobile station in a mobile radio telephone system. The Dicker et al. arrangement uses a conventional power control scheme such that when the transmission quality is determined to be poor and the information was transmitted with a low transmission power, a message for increasing the transmission power is transmitted to the mobile station. (See, e.g., Dicker et al. at column 4, lines 36-39.) But if the poor transmission quality for a first mobile station is the result of interference from another mobile station, the other mobile station will also increase its transmission power under Dicker et al.'s power control scheme. This will result in little or no improvement in transmission quality for the first mobile station. The power control scheme of Dicker et al. does not address poor transmission quality that results

from interference from other mobile stations. And, as stated above, Dicker et al.'s power control scheme has no effect on channel bandwidth.

For at least the foregoing reasons, independent claims 1, 8, and 15, as well as their various dependent claims 2 and 9, are patentably distinguishable over the Dicker et al. patent. Accordingly, it is respectfully requested that the rejection of claims 1, 2, 8, 9, and 15 under Section 102(e), be withdrawn. **If the Office chooses, instead, to maintain this rejection in the next Action, then Applicant requests that an authoritative reference be cited that supports the Office's assertion that decreasing transmission power inherently results in an increase in channel bandwidth, and that increasing transmission power inherently results in a channel bandwidth decrease.**

Claims 3-7 and 10-14 stand rejected under 35 USC §103(a) as allegedly being unpatentable over Dicker et al. in view of MPEP §2144.03 (i.e., that portion of the MPEP which authorizes an examiner to take official notice of common knowledge under some circumstances). (The stated rejection under Section 103(a) actually purports to reject claims "1-15." However, only claims 3-7 and 10-14 are discussed in connection with this ground of rejection, and the remaining claims 1-2, 8-9 and 15 were rejected under Section 102 for anticipation. It is therefore assumed that claims 1-2, 8-9 and 15 were listed in error.) This rejection is respectfully traversed.

Claims 3-7 and 10-14 depend from independent claims 1 and 8, respectively, and are therefore patentable for at least the reasons set forth above with respect to those base claims.

Moreover, the Applicant strongly disagrees with the Office's implied assertion that the additional features defined by the dependent claims "are capable of instant and unquestionable demonstration as being well-known." MPEP §2144.03. To the contrary, it is Applicant's belief that:

- increasing the bandwidth allocated to a communication channel does not inherently comprise decreasing the coding rate applied to a communication signal;
- increasing the bandwidth allocated to a communication channel does not inherently comprise decreasing the number of bits per symbol applied during modulation of a communication signal at the transmitter;
- decreasing the bandwidth allocated to the communication channel does not inherently comprise increasing the coding rate applied to a communication signal at the transmitter;

- decreasing the bandwidth allocated to the communication channel does not inherently comprise increasing the number of bits per symbol applied during modulation at a communication signal at the transmitter; and
- increasing the bandwidth allocated to the communication channel does not inherently comprise decreasing the transmission power.

It has long been settled that, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP §2143.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). In the present instance, the Office has failed to demonstrate that the prior art includes the necessary motivation and knowledge to render obvious the various combinations of features defined by Applicant's claims.

For the foregoing reasons, claims 3-7 and 10-14 (as well as claims 1-2 and 8-9) are believed to be patentably distinguishable over the Dicker et al. patent in view of well-known or common knowledge in the art. Accordingly, it is respectfully requested that the rejection of these claims under Section 103(a) be withdrawn. **If the Office chooses to maintain this rejection in the next Action, it is respectfully requested that proper documentary evidence be provided to support the Office's various assertions. See MPEP §2144.03C.**

The application is believed to be in condition for allowance. Prompt notice of same is respectfully requested.

Respectfully submitted,
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Date: February 28, 2005

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